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Health-Care Practices Of Rural Elders

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RELATIONSHIP OF PSYCHIATRIC DIAGNOSIS AND MEDICATION TO FALLS BY ELDERS RESIDING IN A LONG-TERM MENTAL HEALTH FACILITY

by

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Relationship of Psychiatric Diagnosis and Medication to Falls by Elders Residing in a Long-Term Mental Health Facility

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Abstract

Falls in elders have been identified as the leading cause of injury and accidental death for this age group. Factors which may precipitate falls have been studied, yet clear relationships have not been established. Thus, the purpose of this correlational study was to determine the impact of psychiatric diagnosis and medication to the incidence of falls in elders residing in a long-term mental health facility. This study addressed the question, do psychiatric diagnoses and medication have an impact on falls in institutionalized elders? Orem's Self-Care Deficit Theory of Nursing served as the theoretical framework for this study. A sample of 111 residents in a large state-funded mental health facility participated in this study. A retrospective chart audit was completed and data recorded on the researcher-adapted Christian Falls Assessment Tool. Data were analyzed using the Pearson Product Moment Correlation. The researcher concluded the variables of diagnosis and medication do not significantly impact the incidence of falls in elders institutionalized in mental health facilities. However, a trend identified was, as age increased, falls increased. In providing care to elders, gerontological nurse practitioners (GNP) must recognize

institutionalized elders with mental illness need continuity of care and vigilance in maintaining a hazard-free environment. Physical, mental, functional, and environmental needs must be met. Therefore, research which investigates falls as a marker for serious underlying conditions is recommended. Post-fall assessments completed by GNPs would be an excellent way to identify elders at risk for repeat falls.

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very best. I hope my efforts have not failed her expectations.

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Chapter I

The Research Problem

Falls have been cited as the most serious and leading cause of injury and accidental death in persons over age 65 (Baker & Harvey, 1985; Costa, 1991). Additionally, prolonged hospitalization and disability related to falls in elders cost society approximately $2 billion per year (Costa, 1991). The elderly population has been projected to increase to 34,882,000 by the year 2000 (Ebersole & Hess, 1990), and the anticipated number of institutionalized elders will have increased accordingly (Granek et al., 1987). Falls have posed a continuous and difficult problem for institutionalized elders who are more debilitated and less likely to fully recover from serious injury (Myers et al., 1989). Therefore, research which evaluates causes contributing to falls in this population has been mandated. Thus, the focus of this study was to discern the impact of the variables of psychiatric diagnostic category and medication classification on falls in the institutionalized elder.

Establishment of the Problem

Institutionalized elders have been confronted with physiological and functional limitations such as sensory

deficits, neurological deficits, cardiovascular disease, musculoskeletal changes, and metabolic disorders which predispose them to falls (Brummel-Smith, Kottke, & Williams, 1988). Brummel-Smith (1989) noted that institutionalized elders had fallen more frequently than noninstitutionalized elders with an average of two falls per person per year. Higher rate of falls was attributed to the higher rate of disability among this population and the accurate reporting system of these institutions. The injury rate also was high, with 10 to 25% of these falls leading to serious injury. In fact, 30% of elder patients who experienced hip fracture from falls had died within 5 months (Baker & Harvey, 1985; Myers, Baker, Van Natta, Abbey, & Robinson, 1991).

In addition to causing physical injury, falls have negatively impacted the psychological well-being of elders. Patients who fall subsequently have a developed fear of re-falling. This fear has led to decreased self-confidence and depression which has contributed to these elders becoming dependent upon others, thus fostering an inability to maintain self-care (Brummel-Smith, 1989). Further, institutionalized elders with a history of falls have been physically restrained to prevent falls which has contributed to functionally limiting them (Granek et al., 1987). Considering disability rates and practices which decrease functional abilities, institutionalized elders have

increased susceptibility to serious complications of falls, such as pneumonia, skin breakdown, and deep venous thrombosis (Brummel-Smith, 1989).

Many sources have noted the detrimental effects of falls on elders and the factors contributing to the falls (Brummel-Smith, 1989; Brummel-Smith et al., 1988; Granek et al., 1987). However, no research was found that specifically addressed falls in elders with psychiatric problems who reside in a state mental institution. This population would be at particular risk due to impaired mental functioning and the necessity of ingesting a combination of psychotropic and numerous other drugs for various conditions. Rosen, Campbell, Villaneuva, and Morgan (1985) have determined that mental status and drug side effects have been implicated in falls.

According to Ray (1992), there has been longstanding concern that psychotropic drugs might lead to increased risk of injury due to extrapyramidal symptoms and tardive dyskinesia associated with long-term usage. This concern was based on elders' propensity for drug side effects which may predispose them to injury. Additionally, elders with psychiatric disorders have many high-risk factors such as labile mental status, impaired judgment, impaired sense of reality, and misinterpretation of environment. These factors have led to maladaptive behavior and possibly injury (Poster et al., 1991). Research has been inconsistent in

delineating how drugs and diagnoses relate to falls (Granek et al., 1987). Establishing a strong correlation between these two variables and the frequency of falls with the institutionalized elder with psychiatric problems would be the beginning of establishing the critical basis for development of interventions to prevent falls in this population. Although the diagnosis has been identified as a constant, medication may be altered either by dosage adjustment, discontinuance of the drug, or by change of drug classification.

Even though psychotropic drugs have been linked to an increase in falls, other studies have shown that falls are exacerbated by antidepressants, minor tranquilizers, and other drugs. In addition, polypharmacy associated with multiple disease processes and age-associated susceptibility to drug toxicity can lead to poor coordination, disorientation, confusion, and cardiac arrhythmias (Merck Manual of Geriatrics, 1991).

Elders with long-term mental illnesses are further jeopardized due to factors associated with chronicity, such as abnormal gait and balance related to tardive dyskinesia secondary to long-term use of psychotropics. Also, elders with chronic mental illness and dementia have additional risks related to disorientation, confusion, wandering behavior, and very poor judgment. In addition to mental difficulties, elders also have been faced with multiple

disease processes associated with normal aging. Psychiatric diagnosis coupled with the medication used to control symptoms associated with mental illness and associated factors related to the aging process has been identified as the very issue pertinent to this study.

The problem of falls in the institutional setting deserved attention not only because of the gravity of the situation but also due to the unique opportunities for observation, assessment, and prevention (Granek et al., 1987). Therefore, the purpose of this study was to determine the association of medication classification and psychiatric diagnosis to falls in an effort to establish criteria for screening patients at risk.

Significance to Nursing

Results of this study could be useful in the practice of nurses who have specialized in the care of elders, Gerontic Nurse Practitioners (GNPs). According to Burnside (1988), expertise in this area has been identified as an important factor to ensure elders quality care and dignity. Information obtained from this study may help the GNP to ensure that institutionalized elders with complex problems are systematically approached through thorough assessment for fall risk factors. The GNP has the opportunity to manage and evaluate the plan of care for psychiatric elder patients relevant to drug therapy. Information generated from this study hopefully will aid nursing staff in

identifying elders at risk for falls and will allow implementation of preventive measures to decrease serious injury related to falls. Also, continued research may be indicated from obtained results to further enlighten health care professionals regarding the care of elders.

Further, the study of elder falls has continued to be a very concrete area in which Orem's Self-Care Deficit Theory can be applied because elders have the desire to remain as independent and productive as possible. The GNP is in a position to conduct an ongoing appraisal of the individual and to determine which of the three nursing subsystems identified by Orem would be appropriate. This study of elder falls also has added to established research as an advanced nurse in practice evaluated an area that has not been explored previously. This study is the first to substantiate the impact of psychiatric diagnosis and medication on falls in elders residing in a mental institution.

Theoretical Framework

Orem's Self-Care Deficit Theory of Nursing served as the theoretical framework for this study. Self-care has been defined by Orem (1991) as "[t]he practice of activities that maturing and mature persons initiate and perform, within time frames, on their own behalf in the interests of maintaining life, healthful functioning, continuing personal development, and well-being" (p. 365). This self-care can

be performed directly by the individual or it can be care provided by another person.

According to Orem (1991), nursing systems are composed of three subsystems: wholly compensatory (complete care is given to the agent); partially compensatory (designed for clients who need part of their care done for them but can do part of their care themselves), and supportive-educative (a combination of support, guidance, provision of a developmental environment, and teaching) (Orem, 1991). Therefore, nursing assists individuals whose self-care capabilities are unequal to their needs (self-care deficit). Elders need to be given as much independence as possible (partially compensatory). However, some individuals may not be able to regain the capacity for self-care due to their mental condition or physical condition. The nurse, in such cases, may be responsible for helping the individual compensate through identification of appropriate self-care agents (Burnside, 1988).

Elders with mental illness who are on medication therapy require special attention due to the potential for decreased judgment, cognition, and the adverse effects associated with these variables. These factors alone have been identified as contributors to falls. Due to age-related changes elders are more susceptible to injurious falls which, in turn, can lead to inability to maintain self-care. Nursing personnel are often required to

compensate for the patient's deficits in a wholly or partly compensatory role. Elders should be allowed to work within their limitations of self-care deficits. Caregivers should be cautioned against taking over tasks a patient can perform independently. Again, the idea should be to maintain self-care and self-esteem as long as possible. Nursing interventions should help prevent further self-care deficits so that self-care may be maintained. To prevent self-care deficit, a plan of preventive action and identifying patients at risk is required.

Assumptions

The assumptions of this study were

1. Age-related changes may lead to elder falls.
2. Elders in mental institutions have fallen.
3. Elders must be allowed to function as independently as possible to maintain self-esteem and promote self-help as long as possible.

Statement of the Problem

Elders who were mentally ill and receiving medication sustained serious injuries related to falls. Numerous hip fractures and other injuries requiring medical attention have been reported. A plan of preventive action as well as identification of patients at risk was needed to prevent self-care deficit.

This study addressed the question, do psychiatric diagnoses and medication have an impact on falls in institutionalized elders?

Hypotheses

The hypotheses which guided this study were

Ho_1: There is no relationship between psychiatric diagnoses and falls by elders residing in a long-term mental health facility.

Ha_1: There is a positive relationship between psychiatric diagnoses and falls by elders residing in a long-term mental health facility.

Ho_2: There is no relationship between medication and falls by elders residing in a long-term mental health facility.

Ha_2: There is a positive relationship between medication and falls by elders residing in a long-term mental health facility.

Definition of Terms

For the purpose of this study, terms were defined as follows:

Psychiatric diagnosis: The most current Axis I diagnosis listed on the patient's Index of Diagnosis in accordance with criteria set forth in the DSM-III-R (American Psychiatric Association, 1988). All Axis I

diagnoses were listed on the Christian Falls Assessment Tool and were coded according to the DSM-III-R.

Falls: According to Tideiksaar (1989), a fall is an "unexpected event in which a person finds himself or herself on the ground" (p. 9). A fall also "involves the interaction of a susceptible host or patient, a predisposing environment, and an inciting agent" (Tideiksaar, 1989, p. 9). Falls were identified on a fall risk assessment form completed at the time of the alleged incident.

Elder: An individual who is 65 years of age or older, resides in a long-term mental health facility, has a psychiatric disorder, is receiving medication, and has a history of falling. Subjects were identified from information obtained on fall risk assessment forms. Diagnosis and medications were confirmed by chart review.

Long-term mental health facility: A mental health institution that is state funded and accepts voluntary, criminal, or court committed patients. For the purpose of this study, length of stay exceeds 90 days as determined by date of admission listed on the patient's face sheet in the record.

Medication: According to Costa (1991), medication/drugs contribute to elder falls. Drugs linked to increased falls include antidepressants, sedatives and hypnotics, tranquilizers, nonsteroid anti-inflammatory

drugs, vasodilators, and antihypertensives. Medication was grouped into classes according to the Physician's '92 Drug Handbook (1992) and recorded on the Christian Falls Assessment Tool.

Chapter II

Review of the Literature

In a selected review of literature, several studies were found relating falls in elders to medication, diagnosis, and environmental factors. However, studies specifically linking the role of drugs and psychiatric diagnoses to elder falls were limited. Researchers have concurred that to prevent falls one must have a thorough understanding of associated risks. The review of literature explored risk factors associated with elder falls.

Poster et al. (1991) conducted a study to determine the incidence of factors contributing to falls. A retrospective cohort design was used with subjects obtained from hospital records. Those who experienced falls were identified, and comparisons were made between cohort patients who fell and those who did not fall ($\underline{N}$ = 376). The study was conducted over 34 months with data collected through incident reports. Data were analyzed using Fisher's exact test with adjustments made for age and gender with the Mantel-Haenzsel technique. Fall outcomes were compared using chi-square tests in generalized linear models.

Results indicated, when age was accounted for, diagnosis did not increase the risk for falls except in two groups. Psychotic patients and depressed patients between 60 and 70 years of age were at greater risk than their age-matched counterparts who did not have these two diagnoses. Longer admissions were associated with a greater likelihood of falling. Sixteen percent of all falls occurred while a patient was getting in or out of bed. Physiological characteristics, such as effect of medication, mobility, imbalance, gait, or sensory impairment, accounted for 57% of falls. All 494 falls were examined for severity and outcome using multivariate analysis. A total of 187 had falls that were serious. Overall, 37% of the falls were categorized as consequential, 10% as serious, and 50% as no injury to the patient.

Poster et al. (1991) concluded that patients fell primarily in their own room, and falls occurred with nearly equal frequency during the evening and day shifts. Additionally, as length of hospital stay increased, other risk factors increased including the possibility of falls. The researchers recommended review by the multidisciplinary team and the hospital's risk management staff to determine whether serious falls could have been prevented. Also, the importance of working with the patient and family on consequences of falls and subsequent treatment was emphasized as part of preventive measures.

Poster et al.'s (1991) study provided direction to this current study as both were conducted in psychiatric settings and explored factors which impacted falls including medication and psychiatric diagnosis. Also falls were concluded as a frequent occurrence in the inpatient psychiatric setting.

Another study about falls among elders residing in institutions was conducted by Rubenstein, Robbins, Josephson, Schulman, and Osterweil (1990). The assumption in this study was that persons prone to falling could benefit from a focused diagnostic assessment and preventive interventions based on pertinent findings. Design was identified as randomized clinical trial. Falls were identified as events reported by the faller or an observer resulting in the person coming to rest on the ground with or without loss of consciousness.

To be included in the study the subjects were screened by a nurse practitioner according to identified criteria. An interview was conducted and written consent obtained. A questionnaire was administered to each eligible faller which included a detailed fall history. One hundred sixty ambulatory subjects ($\underline{M}$ age = 87 years) were randomly assigned to the intervention group ($\underline{n}$ = 79) or to the control group ($\underline{n}$ = 81). Data were collected for one year at 3-month intervals after randomization of subjects and assignment to groups.

The researchers conducted a postfall assessment with detailed physical examination and environmental assessment by a nurse practitioner, laboratory tests, electrocardiogram, and 24-hour Holter monitoring. Probable cause or causes of the fall, identified risk factors, and therapeutic recommendations were given to the patient's primary physician. Pretest and posttest differences between the intervention and control groups were analyzed using the *z* test of proportions for categoric variables, i.e., living location and percentage of subjects hospitalized. The *t* test was employed for equality of means for continuous variables, i.e., number of recurrent falls and number of medications. The Wilcoxon signed-rank test for nonparametric data was used to test for differences in survival, the mean number of hospital days, and hospital admissions.

Rubenstein et al. (1990) found that falls can be viewed as a marker for serious, often unrecognized, underlying illness and disabilities. Many falls were attributed to "losing balance" or an "environmental accident" according to the incident report. Eighty percent of the subjects fell in their own room.

Rubenstein et al. (1990) concluded that ambulatory institutionalized patients should receive a thorough postfall assessment preferably administered by a nurse practitioner. The data clearly indicated that treatable

conditions could be identified and that a thorough fall assessment was cost effective in that it reduces hospitalization and convalescing from injuries sustained. Further studies were suggested with controlled trials to determine if more specific interventions, such as muscle strengthening or gait training for patients identified as high risk would have any effect on reducing the incidence of falls.

Similarities between Rubenstein et al.'s (1990) study and this writer's study included exploration of risk factors associated with elder falls in an institution setting. Determination of fall status was made by incident reports. However, both studies noted the likelihood of unreported falls.

Elder falls in a long-term health care facility were studied in relation to medication and diagnosis by Granek et al. in 1987. Study design was identified as case-control methodology. Diagnoses were obtained from the problem list in the medical record and coded according to the ICD-9-CM manual. Drugs were grouped into classifications according to the 1985 Drug Information Handbook. The association between diagnoses, drugs, and falls was initially tested by forming groups according to diagnostic category or by class of drug. The drug effect was examined for each category or by class of drug. The drug effect was examined for each diagnostic category, and each diagnostic category was

examined in relation to drug class. These procedures isolated the effect of each drug from the effect of prescribing condition. Each resident age 65 years and older was matched solely on the length of stay with a control group of nonfallers. Variables included age, sex, diagnosis, and drugs taken within a 24-hour period. Cases were identified from incident reports completed at the time of the fall. Odds ratios were calculated to determine the relationships between falls and drugs or diagnoses. Chi-squares were computed to ascertain the statistical significance of these associations.

Results indicated the aging process can profoundly affect the body's response to drugs. Four of eight drug classes (antidepressants, sedative/hypnotics, vasodilators, and NSAIDS) were associated with increased odds of falling at 1 to 5 or higher. Drugs were associated with a two-fold risk of being a faller in 32 subgroups, while the same was true of only 15 diagnoses. Findings also were consistent with previous studies which found that patients receiving three or more drugs were at increased risk for falling. According to Granek et al. (1987), more fallers were receiving tranquilizers than nonfallers with an odds ratio of 1 to 8 ($p < .05$). Antidepressants increased a patient's risk for falls by at least 50%.

Granek et al. (1987) concluded that despite a small population, some of the drug combinations were noteworthy

due to high odds ratio with the severity of illness varying from one resident to another. Twenty-nine percent more fallers than nonfallers had congestive heart failure (CHF). Parkinsonian and falls were not significantly correlated and could have reflected the presence of more nursing staff related to a population at risk. Further studies with larger populations and more sophisticated analyses were recommended.

Granek et al.'s (1987) research is very significant to this current study as it related medication and diagnoses to elder falls in a long-term care facility. Instrumentation was a major area of interest to this researcher. The tool used in the Granek et al. (1987) study was adapted for the present research study.

Factors affecting falls in older psychiatric inpatients were studied by Rosen, Campbell, Vallaneuva, and Morgan in 1985. Two studies were undertaken to hopefully identify host factors associated with falls. The first study was a comparison design which consisted of a control group of nonfallers and a comparison group of fallers. All psychiatric geriatric inpatients who had fallen for the first time during a 6-week period were examined within 24 hours by a nurse clinician. The nurse clinician also reviewed the chart and medication flow sheet and interviewed the primary nurse. A data sheet was utilized with a total of 64 variables. Contrary to the authors' expectations,

results indicated very few of the 64 variables as differentiating the two groups.

The second study utilized a cross-sectional design to compare the prevalence of tricyclic antidepressants and neuroleptic use in patients falling. Patients in the two groups were not matched; therefore, the researchers could test for demographic variables such as age and sex. To assess the prevalence of use of tricyclic antidepressants (TCAs) and neuroleptics in the hospital, three separate hospital-wide pharmacy surveys were conducted on Day 1, Day 30, and Day 60 to record age, sex, unit, and TCA and neuroleptic use. Analysis of variance and chi-square analysis did not reveal any difference between the mean age, sex ratio, type of unit, or prevalence of TCA and neuroleptic use.

Results of the study indicated patients aged 50 years and older receiving TCAs or neuroleptics (high- and low-potency types) did not appear to be at greater risk for falling. The incidence of falls for psychogeriatric patients was approximately 40 falls per month per 100 beds. Also the authors found the number of severe injuries due to falls was low: 59 falls recorded in the first study produced only two fractures of wrist and vertebrae while no falls resulted in a fractured hip. Results from the second study allowed comparison of falls in younger patients and

older patients. Patients 50 years and older were 4.9 times more likely to fall than those under age 50.

Rosen et al. (1985) concluded that, contrary to expectations, development of criteria that would predict falls in psychogeriatric patients could not be done beyond the fact patients were geriatric and, therefore, at greater risk for falls. However, the study was viewed as a mandate to make the environment as fall-proof as possible.

The Rosen et al. (1985) study paralleled the current study as elders in a psychiatric setting as well as the impact of drugs on falls were studied. However, only two classes of drugs were addressed: tricyclic antidepressants (TCAs) and neuroleptics. Host factors were identified as age, medical diagnosis, fall-prone conditions which may or may not be part of a diagnosis and drug intake.

Another study conducted by Myers et al. (1989) explored successful implementation of injury-prevention programs. The authors emphasized the gravity of falls in institutionalized elders who generally are more debilitated and less likely to fully recover from serious injury than younger people. However, to implement an injury-prevention program the risks associated with injury needed to be understood. The hypotheses tested were

1. Fractures occurred equally throughout a 24-hour day.

2. Fractures were equally distributed by season.

3. Occurrence of fractures was independent of the frequency of falls.

The population consisted of 230 nursing home patients and 53 chronic hospital patients (N = 283). The median age was 82 years and two thirds of the population were women. The nursing home patients were chronically ill requiring medical and nursing care. The chronic hospital patients had an acute episode of a chronic problem. All incident reports of falls in patients 65 years and older were retrieved for a 3-year period (1982-1984). Reports had been completed by the charge nurse, the nurse, or other staff who witnessed the fall. The occurrence of overreporting or underreporting was noted. Also the reliability of information taken from an incident report was noted as a methodological issue.

Data were obtained from monthly reports. The number of patient days was categorized by age and sex, while level of care was assessed yearly in January, April, July, and October. Results were multiplied by three for an estimate of patient days per year as there was no significant variation by season. Comparisons of fall rates by sex and level of care were made by the use of Z tests which were adjusted for repeated falls per subject and by the Poisson approximation.

Results of Myers et al.'s (1989) study revealed the rate of falls as 5.7 per 1,000 patient days. Men had 6.5 per 1,000 patient days compared to 5.5 per 1,000 patient

days for women ($p < .01$). The fall rate of the chronic hospital patients was 7.5 per 1,000 patient days compared with 5.4 falls per 1,000 patient days in nursing home patients (p .001). Injuries were reported as 525 (32%) per incident reports. Interestingly, the proportion did not differ by sex but increased with age. A greater number of injurious falls occurred on the night shift (11:00 p.m. to 7:00 a.m.). Fifty-one fractures were reported due to falls which occurred most frequently during walking activities. Another interesting factor was the involvement of equipment such as wheelchairs and walkers in the falls. Wheelchairs were involved in 382 (24%) of the falls and in 91 (22%) of injurious falls. Pulling the wheelchair over on oneself was the most frequent factor in injurious falls involving equipment.

Myers et al.'s (1989) study was the first to report the ratio of fractures to falls with a control for frequency. A strong and inverse correlation between frequency of falling and hip versus nonhip fractures was found. Winter was the season for the highest incidence of fractures. The greatest number of fractures and proportion of injurious falls occurred at night when fewer falls were witnessed. These researchers concluded that more staff and more vigilant observation and monitoring were needed. Suggested measures to prevent falls included thorough physical assessment on admission with particular attention to mobility and

neurological functioning, lowering patient beds, energy-absorbing clothing, and a device that prevents falls while facilitating ambulation. Environmental modifications were given as energy-absorbing carpeting and floor, evaluation of the bedroom and bathroom, where most falls occurred for special carpeting, and readily available handrails to break falls. Limitations of the study were identified as unwitnessed falls, and participants were all of the Caucasian race.

Myers et al.'s (1989) study was similar to the current study in that it examined institutionalized elder falls. However, the fall differed as Myers et al. explored the aspects of elder falls including ratio of fractures and other serious injuries related to falls, while this current study explored the impact of diagnosis and medication category on falls.

Another study by Myers, Baker, Van Natta, Abbey, and Robinson (1991) was undertaken. Risk factors associated with falls and injuries among elders in a long-term facility were examined. Variables of interest were identified as demographics, functional status, medications, and diagnoses. The researchers employed a case control study among 184 matched pairs. Each long-term client aged 65 or older who fell between January 1, 1984, and October 31, 1984, was matched on the basis of length of stay with a control who did not fall during the same period of time. Univariate

analysis was used to examine risk factors associated with injurious falls. Falls were identified as events recorded on an incident report cited as "fall." These events included any fall that occurred when getting out of bed or a chair or while walking or transferring. Outcome of injury was defined as burn/scald, contusion, laceration, hematoma, sprain/strain, fracture, or dislocation. Data obtained from both cases and controls included age, sex, visual and ambulatory status, bowel and bladder function, diagnoses, and drugs taken within the preceding 24-hour period. A maximum of 10 diagnoses for each person was obtained from the medical record. Relative odds were calculated using a conditional logistic regression model.

Results from Myers et al.'s (1991) study revealed that injuries due to falls in nursing home elders were related to medication. The use of hypotensive medication was significantly associated with injury among fallers. According to Myers et al., medication modification has been an important method in reducing falls and fractures in nursing homes. A limitation of this study was generalization of the findings as the population was entirely Caucasian.

Myers et al.'s (1991) study substantiated that certain medication impacted elder falls. The current study expanded Myers et al.'s study to include psychiatric diagnoses and demographics for elders residing in a mental health setting.

Summary

Studies have been conducted linking falls to institutionalization, diagnoses, and drugs (Granek et al., 1987; Poster et al., 1991). Results from these studies indicated psychotic and depressed patients between 60 and 70 years of age and patients receiving tranquilizers and antidepressants were more likely to fall. The relationship of falls to underlying conditions was studied by Rubenstein et al. (1990). The data clearly indicated treatable conditions could be identified through a thorough fall assessment to reduce length of hospitalization and cost. Rosen et al. (1985) studied elders in a psychiatric setting receiving TCAs and neuroleptics. However, results indicated patients aged 50 and over receiving TCAs and neuroleptics did not appear to be at greater risk for falling. Another study conducted by Myers et al. (1989) explored successful injury-prevention programs and was the first to report the ratio of fractures to falls with a control for frequency. Conclusions drawn from this study were that more vigilant observation and monitoring were needed.

The current research differed from these previous studies as it examined the relationship of psychiatric diagnosis and medication to falls by elders residing in a long-term mental health facility. All literature reviewed suggested further research was needed to explore other factors such as different classes of medication, age groups,

ethnic groups, gait and balance factors, and various medical conditions. However, no suggestion to study elders diagnosed with mental illness was noted. It was the opinion of this author that elders residing in a long-term mental health facility are at particular risk for falls due to long-term psychiatric diagnoses coupled with polypharmacy. Therefore, research is needed examining these factors in order to discern the different levels of care needed for elders identified as high risk.

Chapter III

The Method

The purpose of this study was to examine the relationship of psychiatric diagnosis and medication to falls by elders residing in a long-term mental health facility. Empiricalization of the study has been presented in this chapter.

Design of the Study

The research design utilized was correlational. Research studies that have as their main objective finding the strength of a relation between variables are correlational (Polit & Hungler, 1991). Correlational research has been defined as an interrelationship between two variables or variation in one variable on another (Polit & Hungler, 1991). This study explored the relationship between the variables of interest: psychiatric diagnosis and medication to falls. Controlled variables included residence, long-term mental health facility, and age (over 65 years). The major intervening variable may have been unreported falls.

Limitations. One limitation was the design since the researcher lacked control of the variables and the ability to manipulate the independent variables or randomize

subjects in correlational studies (Polit & Hungler, 1991). However, utilizing this design with a chart audit was most appropriate, as it allowed the researcher to glean information which already existed.

Another limitation was sample selection bias as subject selection was not truly randomized. To offset this, the researcher chose every third client chart for a more representative sample.

Setting, Population, and Sample

The setting for this study was a large state-funded mental health facility located in Alabama. Approximately 1,000 residents, ranging from 12 to over 100 years, have been housed in this facility. Diagnoses varied from substance abuse, one of the most frequent diagnoses, to paranoid schizophrenia (chronic). Residents were provided medical care on the hospital grounds; however, more serious cases were transported to a community hospital. The population for this study was comprised of residents over age 65 years who received medication and had sustained a fall. Subjects were selected from the Accidental Fall Assessment Forms completed at the time of a fall and were grouped according to Axis I (psychiatric) diagnosis. The sample was selected by choosing every third patient from grouped assessment forms. The projected sample was $\underline{N}$ = 100; however, the actual sample was $\underline{N}$ = 111.

Method of Data Collection

Instrumentation. Data were collected using the Christian Falls Assessment Tool adapted from the Prospective Data/Falls Study Tool (Johns Hopkins School of Public Health, Baltimore, MD) (see Appendix A). This instrument was used as a recording tool in studies previously cited by Granek et al. (1987), Myers et al. (1989), and Myers et al. (1991). Permission to use this modified instrument was obtained from Ms. Susan Baker per telephone conversation. The modified version was designed to include seven variables: age, sex, number of falls, type of injury, psychiatric diagnosis, medication classification, and status (when medications were taken). Age, sex, number of falls, and type of injury were obtained from the Accidental Fall Assessment Forms (see Appendix B) incident reports for a period of one year (January 1, 1992 through December 31, 1992). Psychiatric diagnosis, listed on Axis I of Patient Index, and DSM-III-R code were obtained through chart review and DSM-III-R manual. Medication classification was obtained through chart review, and classification was obtained from the Physician's '92 Drug Handbook (1992). Status, when medication was taken, also was obtained from chart review. Information was recorded directly on the tool with each patient's fall identified. Face validity was assured by a panel of experts.

Procedure. Permission was obtained to conduct the study from the Committee on Use of Human Subjects in Experimentation of Mississippi University for Women (see Appendix C). Permission was also obtained from the institution utilized in this study (see Appendix D). The Utilization Review Coordinator provided incident reports which contained names and file numbers of patients who had fallen. Patient names or file numbers were not included on the Christian Falls Assessment Tool due to confidentiality. Age, sex, and number of falls were recorded using numbers or the letters M/F. Psychiatric diagnosis was written out and coded by DSM-III-R criteria. Type of injury, medication classification, and status were recorded according to assigned letters of the alphabet. Information was recorded on the Christian Falls Assessment Tool for statistical analysis.

Method of Data Analysis

Statistical results were examined to identify the strength of the relationship between the variables. Results from the Christian Falls Assessment Tool were analyzed using correlational procedures including multiple regression and Pearson *r*. The alpha level was set at .05 for the purposes of this study.

Summary

Chapter III described empiricalization of this research study which explored the relationship of psychiatric diagnosis and medication to falls in elders residing in a long-term mental health facility. The design of the study, setting, population, and sample, methods of data collection, and methods of data analysis were discussed.

Chapter IV

The Findings

The purpose of this study was to examine the relationship of psychiatric diagnosis and medication to falls by elders residing in a long-term mental health facility. A correlational study was implemented. Empiricalization of the study is explained in this chapter. A description of the participants is presented, followed by outcomes of data analysis related to the research question.

Description of the Sample

The sample (N = 111) consisted of elders who had a psychiatric diagnosis, received medication, had fallen, and who resided in a long-term mental health facility. Ages ranged from 65 to 94 years with a mean age of 76 years. Subjects had resided in a long-term mental health facility from 100 days to over 10 years. With respect to gender, females had more falls (71%) compared to males (29%). When age was accounted for, frequency of falls increased as age increased. The mean age was 76 years with a standard deviation of 6.62. Number of falls varied from one to four. Thirty-nine percent had one fall, 25% had two falls, 19% had three falls, and 17% had four falls. The most frequent injuries were bruises and lacerations (19%), followed by

abrasions (12%). Fractures accounted for 6% of the injuries; skin tears, 3%; and swelling, 2% (see Table 1).

Table 1

Injuries Received by Residents

Type of Injury	Group 1 % age < 76 yrs	Group 2 % age > 76 yrs
Fracture	6	7
Bruise	22	16
Skin tear	0	5
Swelling	2	2
Laceration	18	20
Abrasion	11	12
No injury	41	38

Note. N = 111.

Results of Data Analysis

Analyzing the variables of diagnosis and medications with respect to falls, the researcher determined there were no significant correlations. Additionally, the impact of age of the elder with number of falls was calculated. Again, no significant correlation emerged. These data are presented in Table 2.

Table 2

Analysis of Impact of Diagnosis, Medication, and Age to Falls Using Pearson Product Moment Correlation in Institutionalized Elders

Variable	r	p
Diagnosis	.13	.18
Medication	-.07	.48
Age	.03	.77

Note. N = 111.

One research question guided this study: Do psychiatric diagnosis and medication have an impact on falls in institutionalized elders? The Christian Falls Assessment Tool was used to record number of falls, psychiatric diagnosis, classification of medication, and status which identified if the medication had been taken 24 hours prior to or after the fall, had been omitted, or was a new drug.

A total of 111 falls occurred with a mean of 2.14 falls per resident. Sixteen classifications of medication were identified with a mean of 3.77 per resident and 20 primary diagnoses were identified with a mean of 1.42 per resident (see Table 3).

Table 3

Falls Analysis Related to Category of Drugs Using Frequency and Percentile

Category	No. of of drugs	F	%
Psychiatric	0	2	2
	1	47	42
	2	56	50
	3	6	5
Cardiovascular	0	36	32
	1	54	49
	2	12	11
	3	7	6
	4	2	2
Analgesics	0	96	96
	1	15	15
Other drugs	0	11	10
	1	81	73
	2	18	16
	3	1	1

Note. N = 111.

Additional Information

The researcher further sought to determine the relationship of primary, secondary, and tertiary psychiatric

diagnosis to falls. The majority (58%) of the falls occurred in elders with the primary diagnosis of senile dementia of the Alzheimer's type (SDAT) while 93% had no tertiary diagnosis (see Table 4).

Table 4

Falls Analysis Related to Primary, Secondary, and Tertiary Psychiatric Diagnosis

Diagnosis	F	%
Primary		
SDAT[a]	65	58
Schizophrenia	33	30
Depressive disorders	15	12
Secondary		
SDAT	10	10
Schizophrenia	18	16
Depressive disorder	11	10
No secondary diagnosis	72	64
Tertiary		
SDAT	2	2
Schizophrenia	3	3
Depressive disorders	1	1
Alcohol dependence	2	2
No tertiary diagnosis	103	93

Note. N = 111.

[a]SDAT = Senile dementia of the Alzheimer's type.

Another factor of interest to the researcher was whether the classification of drugs ingested by the elder impacted the number of falls. Findings were perplexing. The researcher determined that as the number of drugs consumed increased in the categories of psychiatric, cardiovascular, and other, elders had fewer falls. However, with respect to analgesics the incidence of falling was less in those elders who took pain medication.

Summary

The results of the data analysis were described in Chapter IV. The sample including demographics were presented. Each item of the Christian Falls Assessment Tool was statistically analyzed to determine if any significance could be identified. Results from statistical analysis of falls related to psychiatric diagnosis and medication showed no significant correlation. However, as age increased, falls increased. Chapter V will provide an outcome of the findings including discussion, conclusions, implications, and recommendations.

Chapter V

The Outcomes

Falls in elders have been identified as the leading cause of injury and accidental death. Factors precipitating falls have been presented in the literature; however, research relating falls to psychiatric diagnosis and medication in institutionalized elders is limited. This correlational study examined the relationship of psychiatric diagnosis and medication to falls in institutionalized elders. Data were collected using the researcher-adapted Christian Falls Assessment Tool. Orem's Self-Care Deficit Theory provided the theoretical framework.

An explanation of the findings in relation to the research question are discussed in this chapter. Conclusions are drawn, implications for nursing are examined, and recommendations are made based upon these findings.

Summary of Findings

A total of 111 falls by elders aged 65 to 94 years were reported during a one-year period (January 1, 1992 to December 31, 1992). Seventy-nine fallers (71%) were female, and 32 fallers (29%) were male. Number of falls per resident ranged from one to four, with 39% of the

participants having one fall, 25% having two falls, 19% having three falls, and 17% having four falls. One hundred percent (N = 111) of the subjects had at least one primary psychiatric diagnosis and were receiving medications. Twenty-seven diagnostic categories were identified which were grouped into dementia, schizophrenia, and depressive disorders. Fifty-eight percent (n = 65) of the sample were classified as dementia, 30% (n = 33) were classified as schizophrenia, and 12 (n = 13) were classified as depressive disorders. Sixteen drug classifications were grouped into the categories of psychiatric, cardiovascular, analgesics, and other drugs. One hundred nine participants received at least one psychiatric medication. Seventy-five participants received at least one cardiovascular drug. Fifteen participants received an analgesic, and 100 participants received at least one other drug, such as thyroid replacement, estrogen replacement, vitamins, iron therapy, or steroids.

Types of injuries ranged from fractures to no injury reported. The most frequent injuries were bruises, lacerations, and abrasions. No significant relationship between psychiatric diagnosis and medication to falls was found in these institutionalized elders.

Discussion

Findings from the current study imply that the variables of diagnosis and medication do not significantly

impact falls in elders residing in a long-term mental health facility. This finding may be compared with previous research conducted by Poster et al. (1991) and Rubenstein et al. (1990). Poster et al. explored factors which impacted falls, including medication and psychiatric diagnosis, and determined that diagnosis did not impact the risk for falls except in patients diagnosed with psychosis and depression. Results also indicated that older patients receiving TCAs or neuroleptics (high and low potency types) did not appear to be at greater risk for falling. Additionally, Rosen et al. (1985) found that diagnosis and drug use were not predictors of fallers. Current findings substantiate the conclusions of these researchers.

However, Myers et al. (1991) found that medications were related to both falls and injurious falls in institutionalized elders. Results of the current study seem to contradict these findings, as no significant relationship between medication and falls was found. Although the majority of reported falls did not result in injury, some falls did contribute to injuries. For example, fractures occurred in 6% of elders under age 76, and in 7% of elders over age 76. The low incidence of injuries in the long-term mental health studies could possibly be related to staffing patterns, physical restraints for fall precautions, propensity for sedation of some psychotropic medications, issues related to lack of mobility, and physical

deterioration associated with age-related changes. These factors may illustrate the application of Orem's (1991) three nursing systems (partially compensatory, wholly compensatory, and supportive-educative) in maintaining and respecting self care. For instance, normal age changes and pathological conditions which occurred in this elder sample were recognized and attended to, resulting in a low incidence of falls (Orem, 1991). In Myers et al.'s study, the larger sample and different methodology of the two studies may account for varying results. However, the retrospective chart audit and randomization of subjects employed in this study provided a strong basis for controlling extraneous variables and lends credibility to these findings.

The only study which addressed the relationship of medication and diagnosis in relation to elder falls in a long-term care facility was conducted by Granek et al. (1987). Granek et al. concluded that the odds of being a faller were significant ($p < .01$) for residents receiving antidepressants, sedatives/hypnotics, or vasodilators, and for those with depression or osteoarthritis. While Granek et al.'s study included the diagnoses of depression, neurotic disorders, and dementias, the majority of diagnoses were medical. The current study found that patients with the primary diagnosis of senile dementia of the Alzheimer's type (SDAT) had more (65) reported falls, while patients

with the primary diagnosis of schizophrenia had only 33 reported falls. One possible explanation for the lack of significance regarding psychiatric diagnosis and medication to falls could be due to the lack of inclusion of medical diagnosis in this current study. On the other hand, the elimination of these diagnoses may be a covariant strength.

In addition to psychiatric diagnosis and medication having no significant impact on elder falls, age showed no significant correlation in this study. However, the researcher noted that as age increased, the number of falls also increased. This trend supported an earlier study by Rosen et al. (1985), which found patients 50 years and older were 4.9 times more likely to fall than those under 50 years of age. Poster et al. (1991) determined that advanced age frequently was accompanied by multiple physical disabilities as well as higher sensitivity to drug side effects. Yet, Poster et al. (1991) noted that when age was accounted for, diagnosis did not increase risk for falls except in psychotic and depressed patients between 60 and 70 years of age, a finding contrary to the results of this study.

Conclusions

This researcher concluded diagnosis and medication as variables do not significantly impact falls in elders institutionalized in mental health facilities. This finding supported similar research in a variety of long-term care facilities (Granek et al., 1987; Poster et al., 1991).

A trend identified by this researcher was as age increased, falls increased in elders residing in a long-term mental health facility. This finding also was supported by Granek et al. (1987), Poster et al. (1991), and Rubenstein et al. (1990).

According to Orem's Self-Care Deficit Theory, nurses assist individuals whose self-care capacities are unequal to their needs (Orem, 1991). Due to age-related changes, elders are more susceptible to injurious falls which, in turn, can lead to inability to maintain self-care. Elders of advancing age should be monitored closely but allowed to work within their limitations of self-care. This approach would allow elders to feel more independent and would increase self-esteem which is so important for this age group.

Implications for Nursing

A number of implications for nursing science were derived from this study. Implications are suggested for research, theory, practice, and education.

Research. Limited studies were found that examined psychiatric diagnoses and medication in relation to institutionalized elders. Therefore, more research is needed to gain information which substantiates efficient fall prevention plans and identifies elders at risk for falls. Additionally, research should investigate falls as an indication of serious underlying conditions.

Theory. Nursing theory is tested through research; therefore, Orem's definition of nursing needs to be tested further in studies to provide new evidence of applicability of this theory to the gerontological nurse practitioner (GNP) role, risk management, and care of elders. The three sub-systems identified in Orem's Self-Care Deficit Theory (wholly compensatory, partly compensatory, and supportive-educative) should be investigated in all areas of nursing. Orem's Self-Care Deficit Theory of Nursing can readily be applied to gerontic nursing as elders desire to remain as active and productive as possible.

Practice. In providing care to elders, GNPs must recognize institutionalized elders with mental illness need continuity of care and vigilance in maintaining a hazard-free environment. The GNP, due to advanced education, is most qualified to provide a safe, nurturing, and caring environment to elders in a chosen area of practice. Collaboration with other health care practitioners is vital to ensure a holistic approach and plan of care. Also, completion of post-falls assessment by GNPs would be an excellent way to identify patients at risk for repeat falls.

Education. As the elder population increases, it is essential that GNPs be prepared to respond to the special needs associated with aging. The findings of this study indicate that as age increases, falls increase. Physical, mental, functional, and environmental needs must be

addressed. Schools of medicine and nursing should provide education in gerontology in order to meet the needs of an aging population. Children in grade school and throughout high school should be provided with information on aging and mental illness to avoid biased attitudes toward the elderly and/or mentally ill.

Recommendations for Further Study

Based on the findings in this study, the following recommendations are made:

Research

1. Replication of this study to include environmental hazards and medical conditions.

2. Implementation of research which investigates falls as a marker for serious underlying conditions.

3. Replication of this study in another geographic location or including a variety of long-term health facilities.

Nursing

1. Perpetuation of Orem's Self-Care Deficit Theory with emphasis on the three subsystems for long-term care.

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APPENDIX A

CHRISTIAN FALLS ASSESSMENT TOOL

Christian Falls Assessment Tool

1. Age:_____ 2. Sex: Male_____ Female_____

3. Number of falls:_____

4. Type of injury
   - _____ a. Fracture
   - _____ b. Bruise
   - _____ c. Skin tear
   - _____ d. Swelling
   - _____ e. Laceration
   - _____ f. Abrasion

5. Psychiatric Diagnosis
   - a. _____ DSM-III-R #_____
   - b. _____ DSM-III-R #_____
   - c. _____ DSM-III-R #_____
   - d. _____ DSM-III-R #_____
   - e. _____ DSM-III-R #_____
   - f. _____ DSM-III-R #_____
   - g. _____ DSM-III-R #_____

6. Medication Classification
   - _____ a. Analgesics
   - _____ b. Antianginals
   - _____ c. Antianxiety agents
   - _____ d. Antiarrhythmics
   - _____ e. Anticoagulants
   - _____ f. Anticonvulsants
   - _____ g. Antidepressants
   - _____ h. Antidiabetic agents
   - _____ i. Antihypertensives
   - _____ j. Antipsychotics
   - _____ k. Bronchodilators
   - _____ l. Diuretics
   - _____ m. Sedatives/hypnotics
   - _____ n. Antibiotics
   - _____ o. Antitussives
   - _____ p. Others

7. Status
   - _____ T = Taken within 24 hours
   - _____ O = Not taken within 24 hours
   - _____ D = Discontinued
   - _____ N = New within last week
   - _____ X = Some omission

APPENDIX B

APPROVAL OF MISSISSIPPI UNIVERSITY FOR WOMEN COMMITTEE ON USE OF HUMAN SUBJECTS IN EXPERIMENTATION

MISSISSIPPI UNIVERSITY FOR WOMEN
Columbus, MS 39701

Office of the Vice President for Academic Affairs
Eudora Welty Hall
P.O. Box W-1603
(601) 329-7142

February 11, 1993

Ms. Linda Baird Christian
c/o Graduate Nursing Program
Campus

Dear Ms. Christian:

I am pleased to inform you that the members of the Committee on Human Subjects in Experimentation have approved your proposed research contingent upon your satisfying the IRB at Bryce Hospital which states IRB includes a consent form.

I wish you much success in your research.

Sincerely,

Thomas C. Richardson
Vice President
for Academic Affairs

TR:wr

cc: Mr. Jim Davidson
Ms. Jeri England
Dr. Nancy Hill
Dr. Rent

MISSISSIPPI UNIVERSITY FOR WOMEN
Columbus, MS 39701

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Thomas C. Richardson
Vice President
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Ms. Jeri England
Dr. Nancy Hill
Dr. Rent

APPENDIX C

AGENCY CONSENT

STATE OF ALABAMA
DEPARTMENT OF MENTAL HEALTH
AND MENTAL RETARDATION
BRYCE HOSPITAL
200 UNIVERSITY BOULEVARD
TUSCALOOSA, ALABAMA 35401
PHONE (205) 759-0799
FAX (205) 759-0890

JAMES F. REDDOCH, JR.
DIRECTOR

GUY HUNT
GOVERNOR

BONICE G. KING
COMMISSIONER

M E M O R A N D U M

February 24, 1993

TO: James F. Reddoch, Jr.
Director

FROM: Paul Bisbee, Ph.D.
Chairman, IRB

RE: Proposed study by Linda Christian

Linda Christian is a registered nurse at Bryce Hospital. Her proposal entitled "The Relationship of Falls to Psychiatric Diagnoses and Medication in Elders Residing in a Long-Term Mental Health Facility" is attached. The proposal has been approved by the IRB of the Mississippi University for Women where Ms. Christian is pursuing a master's degree. Linda has requested to be allowed to collect data at Bryce Hospital, from existing records, which will contribute to her masters work. Her assessment tool is included.

This study appears to be a chart study only and to qualify for expidited review by the Bryce IRB under the HHS guidelines. The protocol has been reviewed by Bob Doerr, R.N., and Durand Bass at my request. Both communicated approval of the study. I have met with Ms. Christian and the following areas of the IRB guidelines were addressed satisfactorily: patient rights, benefits, length of the study, use of results, use of staff time, and confidentiality. Falls are a major concern for elderly patients at Bryce Hospital and any information which could lead to more effective treatment is welcome.

It is my opinion that the proposed project is a chart review and should be approved under the HHS regulation 45 CFR Part 46 as revised (1983); specifically, section 46.10 (b) (2) and (5). If approved, I will be the liason from the Board and be responsible for the acquisition of other assistance when necessary.

Approved: James F. Reddoch Jr. Disapproved: _____

Date: 2-25-93

Enclosures

DSPB/ljh

STATE OF ALABAMA
DEPARTMENT OF MENTAL HEALTH
AND MENTAL RETARDATION
BRYCE HOSPITAL
200 UNIVERSITY BOULEVARD
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JAMES F. REDDOCH, JR.
DIRECTOR

GUY HUNT
GOVERNOR

ROYCE D. KING
COMMISSIONER

M E M O R A N D U M

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Approved: James F. Reddoch Jr. Disapproved: _____

Date: 2-25-93

Enclosures

DSPB/!jh

APPENDIX D

ACCIDENTAL FALL ASSESSMENT FORM

ACCIDENTAL FALL ASSESSMENT FORM

Date: _____ Time: _____ (a.m.) _____ (p.m.) Day of Week: _____

Vital Signs: Temp. _____ Resp. _____ Pulse _____ BP _____

Witness: ( ) Nurse ( ) Physician ( ) MHW ( ) Other _____

Patient's Mental State: ( ) normal ( ) senile ( ) disoriented
( ) sedated ( ) other _____

High Risk Factors Present:

	Yes	No		Yes	No		Yes	No		Yes	No
New admission (within 2 weeks)	( )	( )	Cardiac Medications	( )	( )	Visual deficit	( )	( )	Previous Falls	( )	( )
Transfer to unit or room change (within 2 weeks)	( )	( )	Tranquilizers	( )	( )	Dementia	( )	( )	No. during past 6 months	_____	
Medication Changes (within 30 days)	( )	( )	Sleeping Rx	( )	( )	CVA	( )	( )			
			More than 5 meds.	( )	( )	Amputee	( )	( )	No. resulting in injury	_____	
			Incontinent (urine)	( )	( )	Diabetes	( )	( )			
			Hearing deficit	( )	( )	Parkinsonism	( )	( )			

Functional Assessment: IND-Independent; PA-Partial Assistance; IA-Total Assistance

Dressing ( ) Getting in/out of bed ( ) Feeding ( ) Wheelchair Management ( )
Toileting ( ) Rising/standing ( ) Ambulation ( )

Description of Fall (if applicable)

( ) from bed - side rails ( ) up ( ) down
( ) getting in and out of bed
( ) from wheelchair/chair
( ) from toilet
) ambulatory
( ) unassisted
( ) assisted
( ) tub/shower
( ) found on floor
wet floor ( ) yes ( ) no
( ) restraints ordered
( ) yes ( ) no
in place ( ) yes ( ) no
( ) from stretcher
( ) devices ( ) yes ( ) no
( ) wheelchair
( ) walker
( ) hemicane
( ) cane

Location of Occurrence

( ) bedroom
( ) bathroom
( ) shower area
( ) dining room
( ) elevator
( ) clinic
( ) physical therapy/ occupational therapy
( ) hallway
( ) outside facility
( ) other _____

Site of Injury

( ) head ( ) neck ( ) elbow ( ) upper leg
( ) face ( ) chest ( ) lower arm ( ) lower leg
( ) eyes ( ) abdomen ( ) hand ( ) foot
( ) mouth ( ) trunk ( ) finger ( ) toe
) ears ( ) back ( ) hip ( ) other _____
( ) nose ( ) upper arm ( ) knee

Type of Injury

( ) laceration ( ) other
( ) hematoma _____
( ) abrasion _____
( ) sprain _____
( ) fracture _____
( ) burn

Nurse's Account of Occurrence: _____

Nursing Measures Taken to Prevent Recurrence: _____

Occurrence Reported to: Supervisor RN-Name: _____ Time: _____

M.D. _____ Pt. Seen At _____

Signature Supervisor RN _____ Signature Nurse _____

M.D.'s Report of Occurrence, Examination and Treatment: _____

Signature M.D. _____

BH-1400 3/86 Original: Nursing Service Office Copy: Unit Coordinator

ALABAMA DEPARTMENT OF MENTAL HEALTH AND MENTAL RETARDATION

ACCIDENTAL FALL ASSESSMENT FORM

Date: _____ Time: _____ (a.m.) _____ (p.m.) Day of Week: _____

Vital Signs: Temp. _____ Resp. _____ Pulse _____ BP _____

Witness: ( ) Nurse ( ) Physician ( ) MHW ( ) Other _____

Patient's Mental State: ( ) normal ( ) senile ( ) disoriented
( ) sedated ( ) other _____

High Risk Factors Present:

	Yes	No		Yes	No		Yes	No		Yes	No
New admission (within 2 weeks)	( )	( )	Cardiac Medications	( )	( )	Visual deficit	( )	( )	Previous Falls	( )	( )
Transfer to unit or room change (within 2 weeks)	( )	( )	Tranquilizers	( )	( )	Dementia	( )	( )	No. during past 6 months	_____	
Medication Changes (within 30 days)	( )	( )	Sleeping Rx	( )	( )	CVA	( )	( )			
			More than 5 meds.	( )	( )	Amputee	( )	( )	No. resulting in injury	_____	
			Incontinent (urine)	( )	( )	Diabetes	( )	( )			
			Hearing deficit	( )	( )	Parkinsonism	( )	( )			

Functional Assessment: IND-Independent; PA-Partial Assistance; IA-Total Assistance

Dressing ( ) Getting in/out of bed ( ) Feeding ( ) Wheelchair Management ( )
Toileting ( ) Rising/standing ( ) Ambulation ( )

Description of Fall (if applicable)

( ) from bed - side rails ( ) up ( ) down
( ) getting in and out of bed
( ) from wheelchair/chair
( ) from toilet
( ) ambulatory
  ( ) unassisted
  ( ) assisted
( ) tub/shower
( ) found on floor
  wet floor ( ) yes ( ) no
( ) restraints ordered
  ( ) yes ( ) no
  in place ( ) yes ( ) no
( ) from stretcher
( ) devices ( ) yes ( ) no
  ( ) wheelchair
  ( ) walker
  ( ) hemicane
  ( ) cane

Location of Occurrence

( ) bedroom
( ) bathroom
( ) shower area
( ) dining room
( ) elevator
( ) clinic
( ) physical therapy/ occupational therapy
( ) hallway
( ) outside facility
( ) other _____

Site of Injury

( ) head ( ) neck ( ) elbow ( ) upper leg
( ) face ( ) chest ( ) lower arm ( ) lower leg
( ) eyes ( ) abdomen ( ) hand ( ) foot
( ) mouth ( ) trunk ( ) finger ( ) toe
( ) ears ( ) back ( ) hip ( ) other _____
( ) nose ( ) upper arm ( ) knee

Type of Injury

( ) laceration ( ) other _____
( ) hematoma _____
( ) abrasion _____
( ) sprain _____
( ) fracture _____
( ) burn

Nurse's Account of Occurrence: _____

Nursing Measures Taken to Prevent Recurrence: _____

Occurrence Reported to: Supervisor RN-Name: _____ Time: _____

M.D. _____ Pt. Seen At _____

Signature Supervisor RN _____ Signature Nurse _____

M.D.'s Report of Occurrence, Examination and Treatment: _____

Signature M.D. _____

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